

Declaration of Harold W. Kroto under 37 C.F.R. 1.132  
("Supplemental Declaration of Kroto").

The latest Office Action has rejected the claimed subject matter under 35 U.S.C. §112, first and second paragraphs, alleging that the application does not describe the invention and is non-enabling and that the claims fail to clearly point out what applicants regard as the invention. The Supplemental Kroto Declaration provides further evidence that the application complies with 35 U.S.C. §112, first paragraph and that the claims comply with 35 U.S.C. §112, second paragraph.

Dr. Kroto is an eminent scientist who is well-renowned for his scientific endeavors. He has received several accolades from various universities and scientific organizations for his scientific research and accomplishments (See Paragraph 1 of Supplemental Declaration of Kroto). In fact, he was one of the recipients of the Nobel Prize in Chemistry in 1996 for his participation in the discovery of fullerenes.

Dr. Kroto has reviewed the application and the claims pending therein (Paragraph 5 of Supplemental Declaration of Kroto). Based upon his review, he is of the opinion that the above-identified specification describes the preparation of C<sub>60</sub> in macroscopic amounts (Paragraph 8 of Supplemental Declaration of Kroto).

He further testifies that the term "macroscopic" is clearly understood by the ordinary skilled artisan (See Paragraph 9 of Supplemental Declaration of Kroto). Thus, based upon this testimony, the term "macroscopic" is not ambiguous. This testimony evidences that the term "macroscopic" is not indefinite. This testimony must be considered by the United States Patent and Trademark Office and cannot be ignored.

Thus, the testimony of Dr. Kroto provides evidence in furtherance of those described in the Response dated October 27, 1999 that clearly establishes that the term "macroscopic" has a definite meaning. Moreover, based upon all of this evidence, it is clear that the metes and bounds of the claims are well defined, notwithstanding the allegations of the Office Action to the contrary.

Dr. Kroto also attests that the specification provides evidence which clearly shows that the inventors had produced macroscopic amounts of fullerenes, e.g.,  $C_{60}$ , at the time of the filing thereof (See Paragraph 15 of Supplemental Declaration of Kroto). In this vein, attention is directed to Paragraph 15 of the Supplemental Declaration of Kroto, whereby he testifies that the fact that in Example 1 a brownish red powder was produced connotes to the skilled artisan that the product could be seen with the naked eye. Id. Moreover, Dr. Kroto further avers that he has repeated the procedure which is described in the instant specification and has prepared and isolated fullerenes, e.g.,  $C_{60}$  in macroscopic amounts

(Paragraph 18 of Supplemental Declaration of Kroto). Furthermore, Dr. Kroto further testified that the process described in the application and recited in the claims inherently produce, inter alia, fullerenes, e.g., C<sub>60</sub> in macroscopic amounts (Paragraphs 19-24 and 28 of Supplemental Declaration of Kroto).

Thus, Dr. Kroto has testified that the application contains sufficient evidence that the inventors at the time of the filing of the underlying application had possession of a process for preparing C<sub>60</sub> in macroscopic amounts, the subject matter of the present application.

He has also testified that the application is enabling for the preparation of C<sub>60</sub> in macroscopic amounts, the subject matter of the present application. Again, attention is directed to Paragraphs 11, 21 and 26 of the Supplemental Declaration of Kroto. His testimony that he and others following the procedure in the application have obtained inter alia, fullerenes, e.g., C<sub>60</sub>, in macroscopic amounts without an undue amount of experimentation provides strong evidence that the application is enabling for the claimed invention.

Thus, the testimony of Dr. Kroto in the Supplemental Declaration provides further evidence that the application describes and is enabling for, inter alia, the preparation of C<sub>60</sub> in macroscopic amounts, the subject matter of the present application. Case law had held that if a person of ordinary skill in the art would have understood from reading the

specification that the inventor had possession of the claimed invention at the time of filing the application, then the written description requirement of 35 U.S.C. §112, first paragraph, is met. In re Alton, 76 F.3d 1168, 37 USPQ2d 1578 (Fed. Cir. 1996). Dr. Kroto so testified. Moreover, Dr. Kroto further testified that the application is enabling for the preparation of, inter alia, C<sub>60</sub> in macroscopic amounts, which testimony cannot be ignored by the United States Patent and Trademark Office.

Thus, in view of the Remarks and the Supplemental Declaration of Dr. Kroto as well as the Remarks in the Response dated October 27, 1999, applicants respectfully submit that the rejection of the claimed subject matter under 35 U.S.C. §112, first and second paragraphs is obviated, and withdrawal thereof is respectfully requested.

The Office Action has cited the article, by Kratschmer, et al. in Chemical Physics Letters, 1990, 167-170 as a reference to support a rejection of the claims under 35 U.S.C. §103. Although the article does not describe the isolation of fullerenes, e.g., C<sub>60</sub>, from the soot, the Office Action has taken the position that it describes the first step, i.e., the vaporization step of the present process, and has used the reference in combination with U.S. Patent No. 3,094,428 to Hamilton, et al. ("Hamilton, et al.") and an article by Kargin, et al. in the Colloid Journal of the USSR, 1967, 29, 256-259 ("Kargin, et al.").

Although applicants had previously submitted an In re Katz Declaration executed by Dr. Kratschmer, in which he attested that Fostiropoulos is not an inventor of the subject matter of the present invention and that with respect to the vaporization step, Dr. Fostiropoulos is not an inventor, the United States Patent and Trademark Office has taken the position that the statements made in the book entitled "Perfect Symmetry, the Accidental Discovery of Buckminster fullerene by Baggott ("Baggott") leads to a different conclusion.

As testified by Dr. Kratschmer, Baggott was not in Kratschmer's laboratory at the relevant time; he is just reporting on events from interviews, letters and published accounts (Paragraph 11 of Supplemental Declaration of Kratschmer). In contrast, the comments made by Kratschmer were ones that were made by someone who has first hand knowledge (Paragraph 12 of Supplemental Declaration of Kratschmer). Thus, the statements by Baggott are mere hearsay and should not be given as much weight, if any at all, relative to the testimony of Dr. Kratschmer.

Regardless, the United States Patent and Trademark Office cites two passages in Baggott to support its conclusion. However, as described hereinbelow, neither of these passages evidence that Fostiropoulos is an inventor of the subject invention or any of the steps described in Kratschmer, et al. for the preparation of C<sub>60</sub>. One passage referred to the experiments relating to the vaporization of <sup>13</sup>C graphite.

As Dr. Kratschmer testifies, Fostiropoulos was not involved with and did not participate in the conception or reduction to practice of the vaporization step of the claimed invention (Paragraph 15 of Supplemental Declaration of Kratschmer). This was conceived and reduced to practice prior to Dr. Fostiropoulos' participation in the fullerene project. Id. Dr. Fostiropoulos' participation was limited to verifying that the camel absorptions of the soot obtained and isolated from the vaporization step were not attributable to artifacts but instead were attributable to a product of the reaction. Dr. Kratschmer testifies that it was this verification experiment which is described in the Kratschmer, et al. article (Paragraphs 15-20 of Supplemental Declaration of Kratschmer). Thus, the experiments described in the article relating to the use of carbon-13 rods and the preparation of soot comprised of carbon-13 were utilized for diagnostic purposes. This evidence is consistent with the comments in Baggott and provides further evidence that supports the conclusion that Fostiropoulos is not an inventor of the first step of the process.

The second passage referred to in the Office Action also is consistent with the fact that Fostiropoulos is not an inventor of the present application. The second passage refers to the experiments performed by Dr. Fostiropoulos in extracting the fullerenes e.g., C<sub>60</sub>, from the soot. As attested to by Dr. Kratschmer (Paragraphs 27-30 of Supplemental Declaration of Kratschmer), Dr. Fostiropoulos conducted the isolation of the

fullerenes, e.g., C<sub>60</sub>, under Dr. Kratschmer's supervision and control. Id. Moreover, as further testified by Dr. Kratschmer, Dr. Fostiropoulos did not suggest the methods for isolating the fullerenes e.g., C<sub>60</sub> from the soot. Id.

Thus, contrary to the allegations by the United States Patent and Trademark Office, there is no evidence to suggest that Dr. Fostiropoulos is an inventor of the subject matter recited and claimed herein. The commentary in Baggott is not inconsistent with and do not contradict the statements in the Kratschmer Declaration or the Supplemental Kratschmer Declaration. Thus, as respects the vaporization step described in the Kratschmer, et al. article, this is not an invention of another, but is an invention of Huffman and Kratschmer, the inventors of the above-identified application. Consequently, in accordance with the holding in In re Katz, 687 F.2d 450, 455 2315 USPQ 15, 18 (CCPA 1982), the Kratschmer, et al. article cannot be used as a reference against the present application.

Therefore, in view of the Supplemental Declarations of Drs. Kroto and Kratschmer, the Remarks herein and the Remarks previously filed on October 27, 1999, the present application is in condition for allowance, which action is earnestly solicited.

Respectfully submitted,

  
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